

A periodic report from

THE NATIONAL DIGITAL LIBRARY PROGRAM

### THE LIBRARY OF CONGRESS

Library of Congress milestone

# U.S. Copyright Office initiates first phase of conversion to electronic copyright registration

he U.S. Copyright Office on Feb. 27 reached a major milestone when it received its first digital application and deposit using its CORDS (Copyright Office Electronic Registration, Recordation and Deposit) system.

That day, the initiation of Phase 1, was made possible after three years of intensive analysis, design, development and internal testing. CORDS is a multiphase, multiyear project to develop and implement a totally electronic system for receipt and processing of copyright applications, deposited works, related documents and rights management information transmitted in digital form over international communications networks such as the Internet.

First submission

The first digital deposit was an unpublished dissertation in the field of computer science titled "Signature and Specification Matching," filed by its author, Amy

Moormann Zaremski, a Ph.D. candidate at Carnegie-Mellon University in Pittsburgh. Copyright Office staff were on site at both the origin of the first submission (the Computer Science Department of Carnegie-Mellon University) and the destination (the Copyright Office) during the first transmission. Initiating the testbed, Ms. Zaremski filled out an application using a specially developed on-line interview form, attached a digital copy of her dissertation, signed both digitally and transmitted them to the Copyright Office over the Internet. The process was completed in a matter of minutes.

"Service to Congress and the nation will be improved," said Register of Copyrights Marybeth Peters. "Works in digital form and associated rights management information needed for required licensing and permissions will be made available much more quickly than in the past."

Members of the CORDS testbed implementation team gathered at the Copyright Office end to receive and review the first CORDS transmissions. This team is composed of members of the CORDS Working Policy Committee and the CORDS Working Group on Operations, as well as staff from the Copyright Automation Group, the Library's Information Technology Services (ITS) and

the Corporation for National Research Initiatives (CNRI), the technical consultants who are developing the system architecture design and software.

The new system has been under development since 1993, as a joint project of the U.S. Copyright Office and the Library of Congress, working with CNRI. Developing

the testbed system with support from the Advanced Research Projects Agency (ARPA) and the Library of Congress, CNRI is leading a national effort with the Copyright Office to develop an infrastructure for linking digital works in electronic libraries and other transaction-based systems. Four to six universities will cooperate in Phase I of the initial CORDS testbed, which is limited to copyright registration and deposit of unpublished technical reports.

continued on page 2; see CORDS

U.S.

**C**OPYRIGHT

**O**FFICE

Subsequent test phases will include work with graphics, images, sound recordings, videos, and other formats. CORDS, from page 1

## Applicants can "sign" submissions electronically

CORDS will allow applicants to submit copyright applications and deposit their digitized works electronically. Claimants will prepare their applications using either a formatted or an interview application process, and attach deposit materials in machine-readable format, "sign" their submissions using public key/private key encryption technology and send applications and deposits to the Copyright Office over the Internet using Privacy Enhanced Mail.

The CORDS system interfaces with three existing Copyright Office automated systems—COINS (the Copyright Office in-process tracking system), COPICS (Copyright Office Publication and Interactive Catagloging System) and CIS (the Copyright Imaging System, which produces copyright registration certificates). The new CORDS system automatically enters information into COINS (the tracking system), the remitter's deposit account is debited for the application fee, and an in-process tracking record (giving the status of the application, fee and deposit) is created, all electronically.

In addition, using CORDS, Copyright Office staff will complete electronic copyright examination and cataloging of the digital applications and works and enter data into COPICS (the cataloging system). Copyright registration certificates will be issued through the Copyright Imaging System (CIS). The Office's digital repository will hold these digital copyright deposits in a secure and verifiable manner.

## Days or weeks to certification instead of months

The CORDS system thus enables the Copyright Office to complete its review and processing and issue a copyright registration certificate within a few days or weeks, compared with a few months under the current process.

The Copyright Office began the testbed with Carnegie-Mellon and will extend Phase 1 testing to include other universities over the next few months. After receipt of the first digitized applications and deposits, the CORDS team is analyzing the experience of this first external transmission and is making necessary adjustments and modifications to the software.

Because of the pioneering system architecture, advanced technology and policy implications involved in developing this totally electronic registration and deposit system, the initial implementation is limited to a series of carefully constructed test phases while the Office continues to improve the system for national usage.

Essential features to be developed and tested in the next few years include "volume scalability" (so that the system can handle an increasing volume of transactions), "platform scalability" (so that the system can be mounted on a variety of small and large devices), protection of multiple data types (including text, images, video, audio and software/executable programs), support for multiple payment mechanisms (including deposit accounts, credit cards, digital cash, etc.), secure storage and retrieval of content in digital repositories (so that the content is stored and retrieved only by intended recipients while maintaining confidentiality and integrity of the works) and development of the handle management system.

continued on the next page

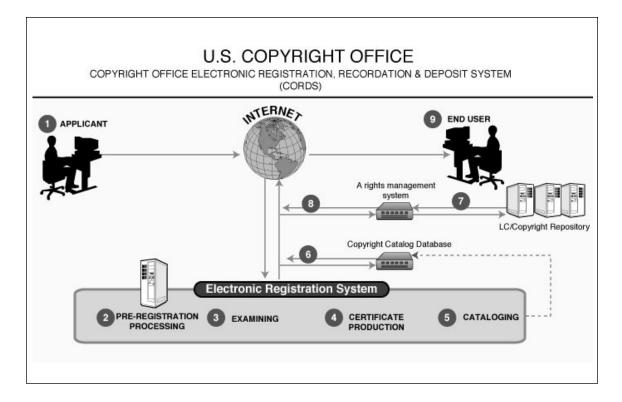
#### What's your handle?

Key to implementing the secure digital repositories for the Office and the Library of Congress is the handle management system through which each digitized work deposited with the Copyright Office will receive a unique digital identifier called a "handle." The proposed handle management system is being tested as a possible national standard to be used to locate individual digital objects and their associated rights and permissions information in digital repositories throughout the country.

In future test phases over the next few years, the Copyright Office will seek the cooperation of several small groups of representative copyright owners. Subsequent phases of CORDS testing will receive and process selected applications and deposits in other formats of copyrighted works starting with a limited number of published textual works, then text with graphics, images, sound recordings, video, and other formats. These test and modification phases will continue while the Internet environment itself is maturing. Expansion of the bandwidth and increased speed of transmitting

continued on page 4

HOW IT ▼ WORKS



#### THE NATIONAL DIGITAL LIBRARY PROGRAM



#### CORDS, continued from page 3

huge numbers of large data files simultaneously are Internet features essential to efficient future CORDS functioning.

Also essential to CORDS is the establishment of the Library's secure digital repository and its related policies necessary to store, retrieve and use the copyrighted materials in accordance with the terms and conditions of access and use established by law and the copyright owners. At a hearing of the House of Representatives Subcommittee on Legislative Branch Appropriations on March 5, Ms. Peters testified that "this electronic system is an essential investment in the future; it is critical to the protection of copyrighted content on the Information Superhighway. ... I can't stress too strongly how critical this system is — not only to the Copyright Office but to the future of the Library of Congress."

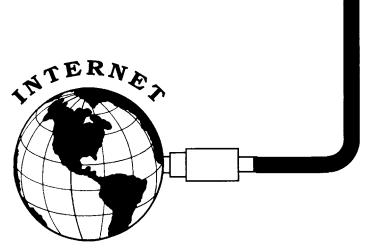
"Once fully implemented over the next few years, the CORDS system will aid both the Copyright Office and copyright owners by providing an efficient new registration and recordation mechanism," said Associate Register for National Copyright Programs Mary Levering, who has coordinated the development of CORDS for the Copyright Office and the Library. "It will also provide an effective source for the Library of Congress to acquire new pub-

lications in digital form for its growing National Digital Library Program," she added. As 'the electronic library of the future,' the Library's National Digital Library collections will include a wide variety of materials in digital form, including both older works converted from the Library's historic collections for educational purposes as well as new titles received in digital form via copyright.

"The collections of the Library of Congress belong to the American people," said Librarian of Congress James H. Billington. "We have a responsibility to make the enormous riches of this institution as accessible as possible to as many people as possible."

Thus digitized copyright deposits received through CORDS will form the nucleus of new electronic works in the Library's collections for the benefit of its users, who will all be enriched through authorized access to these new digitized copyrighted materials.

—Mary Berghaus Levering Associate Register for National Copyright Programs U.S. Copyright Office levering@mail.loc.gov



# Web collection of Americana continues to grow

n March 5 the Library upped by five—to 13—the number of digitized collections it makes accessible to people everywhere over its World Wide Web site. This rich assemblage of Americana reveals history and culture through photographs, pamphlets, motion pictures, broadsides, books and manuscripts from the archives of the Library.

Teachers, librarians, students and others now have access to documents of the Continental Congress, African American pamphlets on politics, slavery and civil rights, and publications of the National American Woman Suffrage Association, among others. These are in addition to the already available photographs of the Civil War by Mathew Brady, photographs of Carl Van Vechten and selected notebooks by Walt Whitman. A video collection offers short films from the turn of the century, and an audio collection features political speeches by American leaders, 1918-1920.

These so-called primary sources are available not just to researchers who can make the trip to Washington, but to everyone with access to the rapidly expanding World Wide Web. Now, K-12 students can use these resources in their studies, and the Library is able to reach this new constituency through the wonders of electronics.

"Our experience shows that such primary sources stir youngsters to ask more questions and make greater use of books," said Librarian of Congress James H. Billington.

The following collections are new on the World Wide Web from the Library at

http://www.loc.gov/

## African American Pamphlets from the Daniel A. P. Murray Collection, 1820-1920

Source: Rare Book and Special Collections Division, Library of Congress. 351 pamphlets (11,000 pages)

The Daniel A.P. Murray Pamphlet Collection presents a panoramic review of African American history and culture, spanning almost 100 years. The entire collection ranges from the early 19th century through the early 20th century, but most of the pamphlets come from the years 1875 to 1900. Among the notable authors represented are Frederick Douglass, Booker T. Washington, Ida B. Wells-Barnett, Benjamin W. Arnett, Alexander Crummel and Emanuel Love.

#### Daguerreotype Photographs, 1842-1862

Source: Prints and Photographs Division. Ca. 600 photographs

Dating back to the beginnings of photography, these photographs include images of Washington, D.C., as well as portraits of famous Americans from the first half of the 19th century. Included are images of Presidents Jackson, Polk, Pierce, Taylor and Buchanan, noted statesmen Henry Clay, John C. Calhoun, and Daniel Webster, and creative figures such as Washington Irving, Edwin Booth, Jenny Lind and Dolley Madison, as well as the earliest known photograph of the U.S. Capitol.

#### Documents of the Continental Congress and Constitutional Convention, 1774-1789

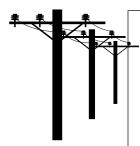
Source: Rare Book and Special Collections Division, Library of Congress. 274 broadsides

The Continental Congress Broadside Collection contains 253 items that document the work of Congress during this critical period of American history. The Constitutional Convention Broadside Collection (21 titles) carries the story forward to the period of the drafting and ratification of the Constitution. Items include extracts of the journals of Congress, resolutions, proclamations, committee reports and treaties. Broadsides range in length from one to 28 pages.

continued on page 7

COME TO WASHINGTON VIA THE WEB

Priceless art and documents from our history are now within the reach of people everywhere.



## The Telecommunications Act—issues remain

Following is a brief analysis of possible effects of the Telecommunications Act of 1996, which was signed into law by President Clinton in the Library's Main Reading Room (see issue No. 5) on Feb. 8.

The melding of telecommunications, video and computers is having an impact on telecommunications industry structure, as traditional telecommunications providers such as telephone and cable television companies expand their capabilities to become more generic multifaceted "information providers." Digital technologies make it possible to distribute voice, data, and video on the same communications channel. Combined with new alternative telecommunications delivery systems, competition is developing in many markets previously considered to be monopolistic. Telecommunications market structures are responding through cable industry consolidations, telephone/cable alliances, wireless telecommunications mergers and a variety of joint ventures.

The 104th Congress has passed legislation, the Telecommunications Act of 1996, that will result in the establishment of a new regulatory framework to address this changing environment. This represents the first major rewrite of our nation's telecommunications policy since the passage of the 1934 Communications Act. Although there have been significant additions to the 1934 law over its 60-year history, much of the underlying framework has remained untouched.

The 1996 act redefines and recasts the 1934 Communications Act to address the relationship among the growing list of communications services, service providers and users. In doing so, it establishes a single, comprehensive, blueprint for telecommunications policy

that addresses our changing telecommunications-information environment. The 1996 act attempts to develop a regulatory framework that will capture the benefits of competition while ensuring that the users and suppliers of a developing and diversified information industry will be protected from exploitative practices and abuse.

The general policy objective of the 1996 act is to open up markets to competition by removing unnecessary regulatory barriers. Removal of such barriers, supporters claim, will permit competition to flourish and ultimately benefit the public interest. Some of the long-term benefits most often cited include: increased consumer choice; decreased consumer prices; increased efficiency; technological advances; and increased investment in our developing information infrastructure.

Also, as these markets transform and the benefits of competition develop, it is assumed that the need for government regulation and oversight will diminish. Provisions also address the redefinition of universal service objectives to incorporate the growing needs of the information age and ensure that we do not develop into a nation of information "haves" and "havenots." Special considerations are also established to address the needs of schools, libraries and rural health care providers.

Although the act passed by overwhelming margins in both the House and Senate, the legislation is not without its detractors. Some members of Congress expressed concerns that the act is still too regulatory. They point to the numerous rulemakings that the act requires as well as the removal of earlier provisions such as those removing foreign ownership restrictions on telecommunications common carriers to support their claim.

see Telecommunications on the next page



Reproduced from the collections of the Library of Congress

WWW, continued from page 5

The National American Woman Suffrage Association (NAWSA) Collection, 1860-1920

Source: Rare Book and Special Collections Division, Library of Congress. 167 items (ca. 10,000 pages)

The NAWSA collection presents 162 books, pamphlets and other artifacts documenting the suffrage campaign. They are part of a larger Library collection donated to LC in November 1938 by Carrie Chapman Catt, longtime president of the National American Woman Suffrage Association. The collection includes works from the libraries of other members and officers of the organization. Among them are: Elizabeth Cady Stanton, Susan B. Anthony, Lucy Stone, Alice Stone Blackwell, Julia Ward Howe, Elizabeth Smith Miller, and Mary A. Livermore.

## World's Transportation Commission Photograph Collection, 1894-1896

Source: Prints and Photographs Division, Library of Congress. Ca. 900 photographs

The World's Transportation Commission Photograph Collection illustrates the many

modes of travel that existed in the 1890s, as seen through the lens of American photographer Wil-

liam Henry Jackson. But in addition to railroads, elephants, camels, horses, sledges, sedan chairs, rickshas and other types of transportation, Jackson photographed city views, street and harbor scenes, landscapes and local inhabitants in North Africa, Asia, Australia and Oceania.

The five new collections provide firsthand evidence of how America lived, worked, and viewed the world during the formative years of our nation. We are happy to supply students, researchers, and citizens everywhere these new Web windows onto life in a younger America.

—Bob Zich National Digital Library Program 202/707-1543; bobz7@aol.com JOIN, OR DIE
Early colonists
were passionate
in their efforts
to establish the
principle of
unity. Now
digitized and
on the Web, this
woodcut by an
unknown artist
appeared in
The Pennsylvania Gazette
May 9, 1754.

#### Telecommunications, continued

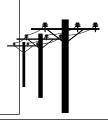
Perhaps of greater importance is the fact that the act contains provisions that require new regulations for the television and computer industries. In addition, some parties, such as the American Civil Liberties Union, have denounced the act because of its provisions that restrict the free flow of certain types of information over the Internet. Some major consumers groups have also opposed the legislation, stating that it "does not do enough to stimulate competition."

The Clinton administration voiced support for the measure and the president signed it into law (P.L. 104-104.) Whether the act will live up to its stated goals is yet to be determined. Much of the activity is now focused at the Federal

Communications Commission, the federal agency charged with interpreting and implementing numerous provisions. Action is also taking place in the courts, where some provisions, particularly those addressing Internet regulation, are being challenged by a broad group of organizations, including the American Library Association. (The U.S. District Court for the Eastern District of Pennsylvania, in a Feb. 15 action, issued a temporary restraining order prohibiting the enforcement of these challenged provisions.)

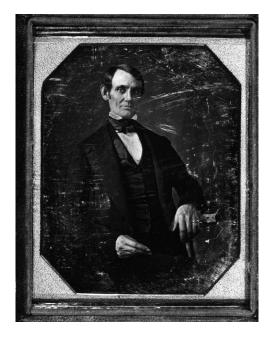
Finally, how the various players and consumers will react in the marketplace and how conditions will evolve in individual markets is still open to question.

-Angele A. Gilroy Congressional Research Service



Library's **AMERICANA** COLLECTION ENRICHES THE INTERNET

History comes alive for students of all ages on the Library's Worldwide Web site. Among the newest additions are these daguerreotype images of Abraham and Mary Todd Lincoln, taken between 1846 and 1850 by Nicholas H. Shepherd. Story starts on page 5.





From the Daguerreotype Collection — Library of Congress

THIS REPORT IS ON THE WEB\*



COPYRIGHT OFFICE MILESTONE— MOVING TOWARD ELECTRONIC REGISTRATION SEE PAGE 1

A PERIODIC REPORT FROM THE NATIONAL DIGITAL LIBRARY PROGRAM

Reports will be published about 12 times a year, using gift funds. Comments and suggestions are welcome.

#### **Editorial Direction**

Suzanne Thorin, Associate Librarian Office of the Librarian 202/707-5220; SUTH@LOC.GOV

Laura Campbell, Director National Digital Library Program 202/707-3300; LCAM@LOC.GOV

#### **Managing Editor**

Caroline Krewson 202/707-5220; CKRE@LOC.GOV

#### **Associate Editor**

Guy Lamolinara 202/707-9217; GLAM@LOC.GOV

#### \* World Wide Web Access

URL: http://lcweb.loc.gov/ndl/per.html ISSN 1083-3978

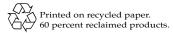
■ Produced by Nancy Brooks Publishing Services ■

THE LIBRARY OF CONGRESS THE NATIONAL DIGITAL LIBRARY PROGRAM WASHINGTON, D.C. 20540-5250

OFFICIAL BUSINESS PENALTY FOR PRIVATE USE \$300



FIRST CLASS MAIL POSTAGE & FEES PAID LIBRARY OF CONGRESS WASHINGTON, D.C. PERMIT No. G-103



Printed by Insty-Prints, Fairfax, VA